

REMARKS/ARGUMENTS

The above noted Office Action has been carefully considered. However, Applicants believe that the invention claimed is truly patentable. Accordingly, reconsideration of all claims of record, particularly as claims 1 and 14 are now amended, is respectfully requested.

Claim Rejections – 35 USC § 103

The Office Action rejected claim 1-3, 14-17 and 19-20 under 35 USC § 103(a) as being unpatentable over Bramanti, U.S. Pat. No. 4,675,615 in view of Tominaga et al., U.S. Pat. No. 5,821,844. The rejection is respectfully traversed.

Claims 1 and 14 are amended to more clearly distinguish over the teachings of Bramanti in view of Tominaga et al.

Bramanti fails to teach or suggest a permanent magnetic core device having a combination of magnetic pole pieces as achieved in the present invention.

As explained in Applicants' response dated May 24, 2004, Tominaga et al. fail to disclose a core structure comprising a plurality of core elements, a plurality of permanent magnets and a plurality of pole pieces supporting permanent magnets. It is respectfully pointed out again that Tominaga et al. teach a permanent magnet 4 having a back surface on which a back yoke is arranged to bridge the outer surface of the back surface and each magnet 4 (column 4, lines 46-48). Consequently, the yoke taught by Tominaga et al. is positioned over an outer surface of the permanent magnet 4, and not positioned between the permanent magnet 4 and the magnetic core material as claimed in amended claims 1 and 14.

Tominaga et al. therefore teach directly away from the invention claimed in amended claims 1 and 14.

As amended, claim 1 claims a first magnetic pole piece positioned between the first layer of the magnetic conductive material and a magnetic pole piece positioned between the second layer of the magnetic conductive material on each side of the respective first and second permanent magnet pieces. As explained above, Tominaga et al. teach that permanent magnetic pieces 4a are directly connected to the ferromagnetic core devices. Yoke pieces 6 are positioned on an out side of the permanent magnetic pieces. This teaches away from the claimed invention.

Nowhere does Tominaga et al. teach or suggest that pole pieces are positioned between the permanent magnetic pieces 4a and the ferromagnetic core material. It is therefore respectfully submitted that Bramanti in view of Tominaga et al. neither teach nor suggest the invention claimed in amended claim 1, and the rejection of claims 1-3 is traversed.

Claim 14 is likewise amended to claim that the permanent magnet sets respectively comprise permanent magnet pieces with magnetic pole pieces positioned between each side of the permanent magnet pieces and the respective first and second core structures. For reasons explained above in detail, Bramanti in view of Tominaga et al. fail to teach or suggest the multi-phase electrical device for use of a power distribution transformer, a power distribution protection device or a current limiting device as claimed in amended claim 14. In fact, as explained above in detail, Tominaga et al. teach that the yokes 6 are always placed on a side opposite the ferromagnetic core from the permanent magnets 4a.

In view of the amendment to claim 14, the rejection of claims 14-17 and 19-20 is likewise traversed.

Allowable Subject Matter

Applicants gratefully acknowledge the allowance of claims 5-8 and 11-13.

Response to Arguments

In the "Response to Arguments," the Office Action states that Applicants made no "argument to reference Tominaga et al." This is incorrect and Applicants respectfully request that the statement be withdrawn. As indicated above, Applicants explained that Tominaga et al. fail to disclose a core structure comprising a plurality of core elements, a plurality of permanent magnets and a plurality of pole pieces supporting the permanent magnets. It was respectfully pointed out that Tominaga et al. teach a permanent magnet 4 having a back surface on which a back yoke is arranged to bridge the outer surface and the back surface of each magnet 4. As further explained, the yoke of Tominaga et al. is positioned over an outer surface of the permanent magnet 4 and is not located between the permanent magnet 4 and the magnetic core material as claimed in amended claims 1 and 14.

Conclusion

In view of the amendments made to claims 1 and 14, all claims pending in this application are now believed to be in a condition for immediate allowance. Favorable reconsideration and early issuance of a Notice of Allowance are therefore requested.

Applicants believe that no fees are presently due. However, the Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 15-0508/158702-1.

Respectfully submitted,

Date: November 12, 2004

By



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CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 12, 2004.



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